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Control circuit for turbine AC motor-generator - monitors power supply to regulate secondary excitation windings for constant operation of synchronous machine

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Number of Countries: 003 Number of Patents: 004

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|-------------|------|----------|-------------|------|----------|----------|
| DE 3634328 | A | 19870409 | DE 3634328 | A | 19861008 | 198715 B |
| JP 62085699 | A | 19870420 | JP 85222812 | A | 19851008 | 198721 |
| JP 62181698 | A | 19870810 | | | | 198737 |
| US 4742288 | A | 19880503 | US 86915392 | A | 19861006 | 198820 |

Priority Applications (No Type Date): JP 8623162 A 19860205; JP 85222812 A 19851008

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|------------|------|-----|----|----------|--------------|
| US 4742288 | A | | 17 | | |

Abstract (Basic): DE 3634328 A

The a.c. motor-generator is operated with the synchronous machine and a control induction machine, and is of secondary excitation type. The degree of excitation of the secondary windings is controlled for an output according to an externally applied control signal. If the power output between the supply and the synchronous machine alters, the control signal is adjusted accordingly, the excitation is adjusted and the change in power output is absorbed so that operation of the synchronous machine is constant.

The external control signal is passed to a comparator processor stage, supplying an input signal to a computer which controls the phase angle of the secondary windings. A second computer which monitors the supply, delivers signals to the phase angle computer.

USE/ADVANTAGE - Power generating plant. Accurate control of water pumped to storage zone is maintained.

Abstract (Equivalent): US 4742288 A

The AC motor/generator has the secondary excitation winding controlled in the amount of excitation so as to generate an output in accordance with an external output command. In the case of variation of power flow between the power system and the synchronous machine, the output command is corrected in accordance with the variation.

The amount of the secondary excitation is controlled by the corrected output command. The variation of power flow between the power system and the synchronous machine is absorbed by the AC motor/generator thereby to prevent the synchronous machine from stepping out.